U.S. Patent Application Serial No. 10/513,250 Reply to Office Action dated December 16, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application.

Claims 1-3 and 6 are amended.

Listing of Claims:

- 1. (Currently Amended) A device [[(1)]] for measuring the supply current (IDDQ) to an electronic device under test DUT [[(5)]], which is powered by a supply voltage (VDUT), said measuring device [[(1)]] being placed in a supply line between said supply voltage and said device under test [[(5)]], said measuring device comprising a current measuring unit CMU [[(6)]], a current bypass unit or CBU [[(20)]] in parallel to said CMU, said CBU comprising a power MOSFET [[(22)]] in the path between said supply voltage (VDUT) and said DUT [[(5)]], said CBU further comprising means to receive a clock signal [[(50)]], being a succession of high and low states, said CBU comprising two transistors (23/24 or 31/32) connected by a series connection [[(30)]], which receive said clock signal [[(50)]] at their gates or bases, the gate of said MOSFET being connected to said series connection [[(30)]], wherein a connection [[(51)]] is present between one terminal other than the gate or base of one of said transistors in series, and the source of said MOSFET [[(22)]].
- 2. (Currently Amended) The device according to claim 1, wherein said two transistors are respectively a P-MOS transistor [[(23)]] and an N-MOS transistor [[(24)]].
- 3. (Currently Amended) The device according to claim 1, wherein said two transistors are bipolar transistors, respectively a PNP transistor [[(31)]] and an NPN transistor [[(32)]].

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- (Previously Amended) The device according to claim 1, wherein said two transistors in series are arranged as an inverter.
- 5. (Previously Presented) The device according to claim 1, wherein said two transistors in series are arranged as a follower driver.
- 6. (Currently Amended) The device according to claim 1, further comprising a processing unit [[(9)]], which is in connection with said current measuring unit [[(6)]] and with an output device [[(8)]], and which is able to acquire an I_{DDQ} measured value from the CMU [[(6)]], wherein the processing unit is able to perform processing actions on said measurement.
- 7. (Original) The device according to claim 6, wherein said processing actions are chosen from the group consisting of:
 - subtracting a measured I_{DDO} value from a reference value or vice versa,
 - comparing a measured I_{DDQ} value with a reference value and producing a pass/fail signal on the basis of the result of said comparison.
 - subtracting a measured I_{DDQ} value from a previously measured I_{DDQ} value or vice versa,
 - comparing a calculated value, resulting from subtracting a measured I_{DDQ} value from a previously measured I_{DDQ} value or vice versa, or from subtracting a measured I_{DDQ} value from a reference value or vice versa, with a reference value and producing a pass/fail signal on the basis of the result of said comparison.
- 8-13. (Canceled)
- 14. (Original) A device according to claim 1, wherein said device is separate from said device under test.
- 15. (Original) A device according to claim 1, wherein said device is incorporated into said device under test.
- 16-17. (Canceled)